

REMARKS / ARGUMENTS

The present claim cancellations and new claims are submitted pursuant to the examiner's comments in a non-final office action letter dated July 9, 2007, and are entered in order to place the claims into condition for allowance in view of said examiner's letter. However, applicants are not conceding in this application that claims 1-18 as originally filed are not patentable over the prior art of record, and applicants reserve the right to pursue any of the originally submitted claims 1-18, as well as other claims, in one or more continuations and/or divisional patent applications.

The specification has also been amended to correct an informality of drafting, and to update identification of an incorporated reference.

Claim Rejections - 35 USC § 103

Claims 1-18 stand rejected under 35 USC § 103(a) as being unpatentable over Sagfors (U.S. Pub. No. 2004/0218617 A1) in view of Barker et al. (U.S. Pub. No. 2002/0131365 A1). In rejecting claims under 35 U.S.C. §103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1986). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988);

Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

Claims 1-18 have been cancelled and new claims 19-33 are not obvious under 35 USC § 103(a) over Sagfors in view of Barker et al. New independent method claim 19 claims a method for managing and transmitting a plurality of data packets through a queue in a computer network system, wherein queue transmit probabilities, and low hysteresis level thresholds are determined and used for data packet flow management in response to a novel and specifically-claimed algorithm or function dependent upon a determination and observation of *one of two hysteresis states*. More particularly, the methods claimed *depend* on observing a current *hysteresis flag* setting and then *choosing* between and applying *divergent* management functions, each of which may also *reset* the flag for *subsequent* data packet management through divergent steps.

Thus, as claimed in new claim 19:

- (i) a hysteresis flag is initialized to ON;
- (ii) with the flag set ON, first packet transmission through the queue is managed, the transmit probability revised and/or a decision whether or not to reset the flag to OFF is made as a function of a hysteresis level queue threshold comparison;
- (iii) and for subsequent packet bursts the state of the hysteresis flag is determined, and two divergent paths and processes are responsively selected, wherein if the flag is ON then the path of (ii) is applied but if instead the flag is OFF, (for example through application of path (ii)),

then the queue is managed, a transmit probability is revised and/or a decision whether or not to reset the flag to ON is made as a function of divergent comparisons: a low level queue threshold comparison and an aggregate link traffic bandwidth-to-maximum link bandwidth capacity comparison.

Therefore subsequent data packets are managed divergently in direct response to ON-OFF hysteresis flag settings provided as a function of previous packet management pursuant to (ii) or (iii) above. A combination of elements that work together “in an unexpected and fruitful manner” would not have been obvious. KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1740 (2007). New claim 19 defines a novel relationship of four parameters or elements (low queue threshold, hysteresis queue threshold, bandwidth-capacity comparison and hysteresis flag state parameters/elements) in a novel and clearly-defined and complex multi-step process. And the specification provides numerous examples of the “unexpected and fruitful” advantages gained by practicing the claimed invention, including the results illustrated in Figures 3, 4-7, 9-13 and 15-19. One would not arrive at the arrangement of these four parameters/elements in the complex multi-step process as specifically claimed by new claim 19 by chance or through general teachings from Sagfors and Barker et al., particularly where not all of the four parameters are taught by Sagfors and Barker et al.

More particularly, Sagfors fails to teach all of the claim limitations. Contrary to the examiner's remarks in the letter of July 9, 2007, the observation of a hysteresis flag and setting thereof to OFF or ON in the context of managing the queue itself is not taught by Sagfors, which instead mentions use of a “congestion flag” at paragraph 34 only in the

context of providing notification to a separate “TCP/UDP” entity: Sagfor’s “congestion flag” and serves no function in choosing or setting thresholds of transmit probabilities in the congestion management techniques taught by Sagfors, nor would one skilled in the art understand Sagfors to teach the novel and specific steps claimed in claim 19.

Barker et al does not supply the missing teachings. Instead, Barker et al offers general teachings on prior art bandwidth allocation transmit (BAT) and related algorithms. One skilled in the art would not understand from the teachings in Sagfors to adapt the general prior art teachings of Barker et al. into the specific method steps claimed by new claim 19.

With respect to other remarks of the examiner in the letter of July 9, 2007, as the present amendment cancels the claims at issue (claims 1-18), and as new claim 19 is believed allowable over Sagfors and Barker et al. for the reasons established above, the issues raised by the examiner in rejecting claims 1-18 have been rendered moot by the present claim cancellations, and applicants presently have no obligation to traverse said remarks at this time. Applicants expressly reserve the right to address and contravene any of the examiner’s remarks in the letter of July 9, 2007 if they should again become ripe.

New claims 20-23 are directly or indirectly dependent upon and, therefore, include all of the limitations of new claim 19; they are each thus also believed allowable over Sagfors and Barker et al. for the reasons established above with respect to new claim 19. New independent article claims 24 and 29 incorporate limitations analogous to those discussed above with respect to new claim 19, and new claims 25-28 and 30-33 are directly or indirectly dependent upon and, therefore, include all of the limitations of new

claims 24 and 29, respectively: each of these claims are thus also believed allowable over Sagfors and Barker et al. for the reasons established above with respect to new claim 19.

Conclusion

In view of the foregoing, it is submitted that claims 19-33 are distinguished patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

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